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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,851	08/04/2004	Chuck W. Plevich	H0006239--1060	8250

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HONEYWELL INTERNATIONAL INC.
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EXAMINER

FRISTOE JR, JOHN K

ART UNIT	PAPER NUMBER
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3751

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,851

Applicant(s)

PLEVICH ET AL.

Examiner

John K. Fristoe Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 3-5, and 21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,634,377 (Stafford) in view of U.S. Pat. No. 5,706,851 (Lopez-Gomez et al.) and U.S. Pat. No. 6,793,601 (Warnke et al.). Stafford discloses a method of repairing a worn regulator valve that includes a housing (110) having an initial passage (105) of a first cross-sectional diameter, an initial poppet (12) including at least a surface disposed within the initial passage (105), removing (col. 5, lines 49-50) the initial poppet (105) from the housing (110), boring the initial passage (105) so as to create an enlarged passage (col. 5, lines 50-53), providing a replacement poppet (col. 5, lines 58-60), wherein the replacement poppet has a first surface (left side of element 32 in figure 5A) and a second surface (the right side of element 32 in figure 5A), and wherein the valve has a regulator section (32) but lacks providing a replacement poppet with an enlarged diameter and a replacement valve of a second material. Lopez-Gomez et al. teach a method of repairing a worn regulator valve comprising the steps of reaming the internal surface of the housing thus increasing its internal diameter (col. 4, lines 9-11) and providing a

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corresponding large diameter in order to reestablish the necessary close tolerances. Warnke et al. teaches a method for repairing a worn regulator valve comprising a valve body of an original material that is susceptible to wear (col. 1, lines (35-38) and replacing the regulator valve with a poppet of a new material that is resistant to wear (col. 3, lines 59-67).

Regarding replacing the poppet with an enlarged poppet, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of repairing a worn regulator valve of Stafford by replacing the worn regulator valve with a replacement valve with an enlarged diameter as taught by Lopez-Gomez et al. in order to reduce the number of parts required to repair the worn regulator valve by eliminating the valve sleeve. Regarding replacing the poppet with a poppet of a wear resistant material, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of repairing a worn regulator valve of Stafford by replacing the worn regulator valve with a poppet of a material that is wear resistant as taught by Warnke et al. in order to eliminate the need for replacement of poppet for a longer period of time.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,634,377 (Stafford) in view of U.S. Pat. No. 5,706,851 (Lopez-Gomez et al.) and U.S. Pat. No. 6,793,601 (Warnke et al.) as applied to claim 1 above, and further in view of U.S. Pat. No. 5,725,007 (Stubbs). Stafford modified above, discloses a method of repairing a worn regulator valve that includes a housing (110) having an initial passage (105) of a first cross-sectional diameter, an initial poppet (12) including at least a surface disposed within the initial passage (105), removing (col. 5, lines 49-50) the initial poppet (105) from the housing (110), boring the initial passage (105) so as to create an enlarged passage (col. 5, lines 50-53), providing a

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replacement poppet (col. 5, lines 58-60), wherein the replacement poppet has a first surface (left side of element 32 in figure 5A) and a second surface (the right side of element 32 in figure 5A), wherein the valve has a regulator section (32), and replacing the worn regulator valve with a larger diameter regulator valve but lacks the poppet being made of stainless steel. Stubbs teaches a valve assembly comprising a poppet (26) made of stainless steel (col. 6, lines 34-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of repairing a worn valve of Stafford by using a poppet made of stainless steel as taught by Stubbs in order for the poppet to resist wear.

5. Claims 5 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,634,377 (Stafford) in view of U.S. Pat. No. 5,706,851 (Lopez-Gomez et al.) and U.S. Pat. No. 6,793,601 (Warnke et al.) as applied to claim 3 above, and further in view of engineering expedient. Stafford modified above, discloses a method of repairing a worn regulator valve that includes a housing (110) having an initial passage (105) of a first cross-sectional diameter, an initial poppet (12) including at least a surface disposed within the initial passage (105), removing (col. 5, lines 49-50) the initial poppet (105) from the housing (110), boring the initial passage (105) so as to create an enlarged passage (col. 5, lines 50-53), providing a replacement poppet (col. 5, lines 58-60), wherein the replacement poppet has a first surface (left side of element 32 in figure 5A) and a second surface (the right side of element 32 in figure 5A), wherein the valve has a regulator section (32), wherein the replacement poppet (12) and the tapered regulator section (32) are made from a unitary piece, and replacing the worn regulator valve with a larger diameter regulator valve but lacks the tapered section being at an angle between 6.5 and 7.5 degrees. One of ordinary skill in the art of valve design would manufacture the valve poppet with a tapered

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section that would regulate the amount of fluid passing through the valve at a rate necessary for the environment the valve is placed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of repairing a worn regulator valve of Stafford by manufacturing the valve having a tapered at an angle between 6.5 and 7.5 degrees as an engineering expedient in order to regulate the flow of fluid through the valve at a certain rate.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Fristoe Jr. whose telephone number is (571) 272-4926. The examiner can normally be reached on Monday-Friday, 7: 00 a.m-4: 30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine R. Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JKF



John K. Fristoe Jr.
Examiner
Art Unit 3751



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5/18/06